

CRYOGENIC FLEXIBLE HOSES

This Technical Bulletin is intended as guidance on the inspection requirements for EIGA Members who transfer cryogenic liquids either into or from cryogenic tankers

Cryogenic hoses are a vital component in the transfer of cryogenic products either to, or from, cryogenic tankers.

The purpose of this Technical Bulletin is to provide guidance to members on how to maintain these hoses in a safe condition.

Cryogenic transfer hoses shall be purchased to recognised standards, for example EN ISO 10380, *Pipework. Corrugated metal hoses and hose assemblies* from suppliers who have been approved for the purpose.

The construction of cryogenic transfer hoses is in almost all cases a convoluted stainless steel inner hose with a stainless steel braided overwrap. In addition, to protect the braiding from damage there is usually a stainless steel spiral wire that stops the braid from touching the ground.

EIGA members have been requested to advise on the inspection requirements of these hoses and if they should be subjected to a periodic pressure test.

The recommendations of EIGA for the inspection of cryogenic transfer hoses are:

- Each time, before they are used, hoses should be visually inspected for signs of damage to any of the components, this would include the spiral wire and, in particular, for broken braiding. If a hose is found with damage, it shall not be used, but sent to an authorised inspection/repair facility;
- If a hose is found to leak in service, the transfer shall be stopped immediately; the hose depressurised and sent to an authorised inspection/repair facility for further action;
- Due to the type of construction of cryogenic transfer hoses, a periodic pressure test is not required. The composite construction of the hose means that a catastrophic hose failure is very unlikely, but that the hose will leak before rupturing. Introducing water into the hose could result in moisture being left in the hose and it being damaged when cooled to cryogenic temperatures;
- Periodic checking of the end connections for wear is recommended to ensure these are not excessively worn; and

Periodic checking by a competent person or replacement based on an assessment of the duty and service of the hose.

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